WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Thursday, March 10, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=AND	
☐	L1	donovan.in. or allergan.asn. or allergen.in.	5437
☐	L2	L1 and (urolog$ or bladder$ or incontenen$ or priapism or urethra or ureter or urin$)	348
☐	L3	L2 and (neurotoxin or neuro-toxin or botulin or botulinum or botulism)	94
☐	L4	L3 and (implant or intravesically or intra-vesical or intra-vesically or im-plant or patch or intradermal or intraepithelial)	34
☐	L5	l1 and bladder	232
☐	L6	L5 and (neurotoxin or neuro-toxin or botulin or botulinum or botulism or botox or dysport)	52
☐	L7	L6 and (implant or intravesically or intra-vesical or intra-vesically or im-plant or lumen or intradermal or urologic or urology or incontinence)	15
☐	L8	l1 and bladder	232
☐	L9	l1 and $bladder	234
☐	L10	L9 and l3	52
☐	L11	L10 and l7	15
☐	L12	(6383509 or 6312708).pn.	4
☐	L13	L12 and bladder	0
☐	L14	L12 and incontin$	0
☐	L15	('6383509')!.PN.	2
☐	L16	('6312708')!.PN.	2
☐	L17	l1 and bladder.clm.	9
☐	L18	l1 and urinary.clm.	4
☐	L19	l1 and urine.clm.	0
		DB=EPAB,JPAB,DWPI; PLUR=YES; OP=AND	
☐	L20	botulinum and implant	10

10/183,221
pgf

END OF SEARCH HISTORY

Search Results - Record(s) 1 through 2 of 2 returned.

L15: Entry 1 of 2 File: USPT May 7, 2002

US-PAT-NO: 6383509
DOCUMENT-IDENTIFIER: US 6383509 B1

TITLE: Biodegradable neurotoxin implant

DATE-ISSUED: May 7, 2002

US-CL-CURRENT: 424/423; 424/236.1, 424/247.1, 424/422, 424/484, 424/486, 514/964

INT-CL: [07] A61 F 2/00, A61 F 13/00, A61 K 9/14, A61 K 39/02, A61 K 39/08

L15: Entry 2 of 2 File: DWPI May 7, 2002

DERWENT-ACC-NO: 2002-517353
ABSTRACTED-PUB-NO: US 6383509B

TITLE: Controlled release system for causing flaccid muscular paralysis comprises a biodegradable polymer containing a neurotoxin

INT-CL (IPC): A61 F 2/00, A61 F 13/00, A61 K 9/14, A61 K 39/02, A61 K 39/08
Derwent-CL (DC): A96, B04 , B07 , C03 , P32
CPI Codes: A12-V01; B04-C01; B04-C03; B12-M10; B14-J02A1; B14-J05; B14-J05A; C04-C01; C04-C03; C12-M10; C14-J05;

Previous Page Next Page

Search Results - Record(s) 1 through 2 of 2 returned.

L16: Entry 1 of 2 File: USPT Nov 6, 2001

US-PAT-NO: 6312708
DOCUMENT-IDENTIFIER: US 6312708 B1

TITLE: Botulinum toxin implant

DATE-ISSUED: November 6, 2001

US-CL-CURRENT: 424/423; 424/184.1, 424/236.1, 424/422, 424/426

INT-CL: [07] A61 K 39/02, A61 K 39/00

L16: Entry 2 of 2 File: DWPI Nov 6, 2001

DERWENT-ACC-NO: 2002-074348
ABSTRACTED-PUB-NO: US 6312708B

TITLE: Botulinum toxin delivery system for treating movement disorders comprises a carrier and a botulinum toxin associated with it

INT-CL (IPC): A61 K 39/00, A61 K 39/02
Derwent-CL (DC): A96, B07 , D22
CPI Codes: A12-V01; B04-C03C; B04-C03D; B04-N03; B11-C04A; B12-M10A; B14-J05; D09-C04;

Previous Page Next Page

intravesical (in'tră-ves'i-kăl)

Within a bladder, especially the urinary bladder.

Prev

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Thursday, March 10, 2005

Hide?	Set Name	Query	Hit Count
		DB=USPT; PLUR=YES; OP=AND	
☐	L1	bladder and (donovan.in. or allergan.asn.)	148
☐	L2	L1 and $catheter	2
☐	L3	($catheter same bladder)	2723
☐	L4	L3 and (neurotoxin or botox or botulin or botulinum or botulism or botuli or toxin or neuro-toxin or dysport)	106
☐	L5	L3 and (neurotoxin or botox or botulin or botulinum or botulism or botuli or neuro-toxin or dysport)	30
☐	L6	6172041.pn. and neurotoxin	1

END OF SEARCH HISTORY

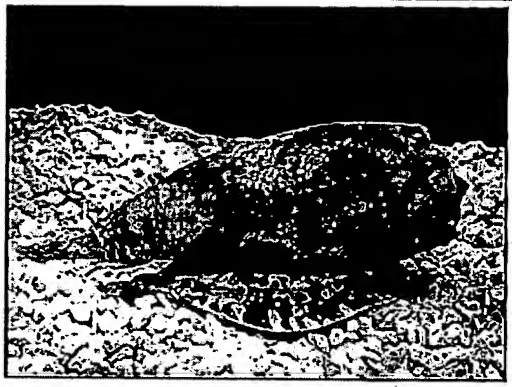
Cone Snail

From Wikipedia, the free encyclopedia.

The **cone snails** (*Conus* spp.) are marine snails found in coral reefs.

They can grow up to 23 cm and are found in tropical waters. There are about 500 different types of cone snails. All cone snails have characteristic sharp fangs that act like harpoons. The venom can be strong enough to kill a human being; 30 deaths have been recorded. The harpoon-like stinger of the cone snail can penetrate gloves or even wetsuits, so people should avoid handling them.

The venom of cone snails varies widely from one species of cone snail to another. The toxins in these various venoms are called conotoxins. These are various peptides, targeting each a specific nerve channel or receptor. This venom also contains a pain-reducing component, first pacifying the victim, before immobilising and then killing it.



Geography Cone (*Conus geographus*)

The venom of some cone snails, like the magician cone snail, show much promise for a non-addictive pain relief 1000 times as powerful as, and a possible replacement for morphine. Cone snails are the only known animals that produce D isomer amino acids . This opens the prospect for a number of potent pharmaceuticals, such as AVC1, isolated from the Australian cone shell *Conus victoriae*. This has proved very effective in treating post-surgical and neuropathic pain, even accelerating recovery from nerve injury.

Some cone snail venom contains tetrodotoxin, which is the same paralytic neurotoxin as that of the pufferfish and the blue-ringed octopus.

Symptoms of a cone snail sting include intense pain, swelling, numbness and tingling. Symptoms can start immediately or can be delayed in onset for days. Severe cases involved muscle paralysis, changes in vision and respiratory failure that can lead to death.

There is even more to come. Some compound of the cone snail's toxin may be used in the treatment of a number of illnesses such as Alzheimer's disease, Parkinson's disease and epilepsy.

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 6849714 B1

L2: Entry 1 of 1 File: USPT Feb 1, 2005

DOCUMENT-IDENTIFIER: US 6849714 B1
TITLE: Protection of endogenous therapeutic peptides from peptidase activity through conjugation to blood components

Detailed Description Text (254):
Other examples of such toxins include omega-agatoxin TK, agelenin, apamin, calcicudine, calciseptine, charbdotoxin, chlorotoxin, conotoxins, endotoxin inhibitors, gegraphutoxins, iberiotoxin, kaliotoxin, mast cell degranulating peptides, margatoxin, neurotoxin NSTX-3, PLTX-II, scyllatoxin, stichodactyla toxin, and derivatives and fragments thereof.

Detailed Description Text (344):
A catheter is used to deliver the therapeutic compound either as part of an endoscopic procedure into the interior of an organ (e.g., bladder, GI tract, vagina/uterus) or adjunctive to a cardiovascular catheter procedure such as a balloon angioplasty. Standard catheters as well as newer drug delivery and iontophoretic catheters can be utilized.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L1 and neurotoxin	1

Display Format: KWIC Change Format

Previous Page Next Page Go to Doc#

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Thursday, March 10, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=AND	
☐	L1	$catheter or catheter$	101727
☐	L2	L1 same (neurotoxin or neuro-toxin or toxin or botulin or botulinum or botulism or botox or allergan or dysport or myboc)	356
☐	L3	L1 near25 (neurotoxin or neuro-toxin or toxin or botulin or botulinum or botulism or botox or allergan or dysport or myboc)	118

END OF SEARCH HISTORY

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6228845 B1

Using default format because multiple data bases are involved.

L2: Entry 1 of 2 File: USPT May 8, 2001

US-PAT-NO: 6228845
DOCUMENT-IDENTIFIER: US 6228845 B1

TITLE: Therapeutic intraluminal stents

DATE-ISSUED: May 8, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; Maura G.	St. Paul	MN		
Stein; Paul M.	Maple Grove	MN		

US-CL-CURRENT: 514/44; 264/279, 264/314, 264/485, 424/93.21, 604/1, 604/265, 604/523

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 2. Document ID: US 5833651 A

L2: Entry 2 of 2 File: USPT Nov 10, 1998

DOCUMENT-IDENTIFIER: US 5833651 A
TITLE: Therapeutic intraluminal stents

INVENTOR (1):
Donovan; Maura G.

Brief Summary Text (5):
Intravascular stents have been disclosed to prevent restenosis. Intravascular stents are medical implants, typically in the form of a hollow cylinder, that are positioned against a body lumen. Metallic intravascular stents are generally permanently implanted in coronary or peripheral vessels. Metal stent designs include those of U.S. Pat. No. 4,733,655 to Palmaz, U.S. Pat. No. 4,800,882 to Gianturco or U.S. Pat. No. 4,886,062 issued to Wiktor. Polymeric stents are also known and both metal and polymeric stents include self-expanding types of stents or balloon-expandable stents. The stent is typically inserted by catheter into a vascular lumen and expanded into contact with the diseased portion of the arterial wall to position the stent and provide internal support for the lumen. Even with

the stent in place, restenosis can occur and the stent itself can cause undesirable local thrombosis.

Brief Summary Text (10):
Catheters have been used to deliver liposomes and viruses to the vascular wall. Chang, et al (Science 267:518-522, 1995) disclose the use of a catheter to deliver an adenoviral vector encoding the retinoblastoma gene product to an injured vessel wall. International patent application WO 95/25807 to Nabel et al. and Ohno et al. (Science 265:781-784, 1994) discloses the delivery of an adenoviral vector to blood vessel cells using an angioplasty balloon catheter.

Brief Summary Text (11):
The duration of exposure to gene transfer reagents to the vascular wall is likely to be an important variable in the effectiveness of gene delivery to cells lining lumen walls. Lumens that support rapid unidirectional fluid flow (i.e., in one example, the coronary arteries) cannot be occluded, yet these tissues need sustained exposure to gene transfer reagents for effective nucleic acid delivery. Ohno et al. (supra) used a balloon angioplasty catheter to administer virus to a blood vessel lumen of the leg. The balloon catheter was positioned in the vessel, occluding blood flow for twenty minutes. Balloon catheters generally block fluid flow and cannot be held in place for prolonged periods to facilitate gene transfer. Balloon catheters cannot be used for gene therapy in coronary arteries or other tissues facilitating rapid fluid flow. Even in areas where there is not heavy unidirectional fluid flow, it is unlikely that catheters can be held in place in vivo for extended periods to facilitate gene transfer without patient discomfort or without surgical procedures that require general anesthesia. These problems have been recognized in the art, as disclosed by Barinaga (Science 265:738, 1994).

Brief Summary Text (12):
A device that directly contacts the injured or damaged tissue in need of gene transfer therapy for extended periods of time is needed, but these devices should not interfere with lumen function. Contact of a bare device, such as a catheter loaded with virus, may not provide the long term contact necessary to maximize gene transfer. Moreover, virus is washed from the catheters as they move through the vasculature to the site of vessel injury and this diluting effect reduces the efficiency of gene transfer from these devices. Free unassociated virus can also pose a risk for widespread uncontrolled gene delivery.

Brief Summary Text (20):
In another aspect of this invention the invention relates to a method for delivering nucleic acid to cells accessible from a wall of a body lumen comprising the steps of providing a stent comprising a lumen-wall contacting surface, a lumen-exposed surface, a first polymer composition comprising fibrin covering at least a portion of the lumen-wall contacting surface to form a polymer covered stent, and virus associated with the first polymer composition wherein the stent is capable of delivering nucleic acid to cells accessible from a wall of a body lumen. The method also includes the steps of positioning the stent in a lumen of the body and contacting the lumen-wall contacting surface of the stent with the wall of a lumen of the body. The lumen wall contacting surfaces contemplated in this invention include a blood vessel, the wall of a lymph vessel, an intestine, a respiratory airway and others. Preferably the stent is introduced into the lumen of the body using a catheter or by surgical implantation.

Drawing Description Text (2):
FIG. 1 is an elevational view of a preferred balloon catheter with stent including a first polymer fibrin composition, according to the present invention.

Detailed Description Text (10):
The term "stent" refers to any device capable of being delivered by a catheter which when placed into contact with a portion of a wall of a lumen to be treated

will also place virus at the lumen wall. The stent has a lumen wall-contacting surface and a lumen-exposed surface. Where the stent is shaped generally as a tube-like structure, including a discontinuous tube or a ring-like structure, the lumen-wall contacting surface is the outside surface of the tube and the lumen-exposed surface is the inner surface of the tube. The stent can include polymeric, metallic or polymeric and metallic structural elements onto which a first polymer composition comprising fibrin is applied.

Detailed Description Text (24):
Soldani, et al. discloses a crosslinked blend of polyurethane and fibrin for vascular graft material ("Bioartificial Polymeric Materials Obtained from Blends of Synthetic Polymers with Fibrin and Collagen" International Journal of Artificial Organs, Vol. 14, No. 5, 1991). This fibrin/polyurethane composition can be used as a coating applied to a stent. Stents with fibrin and polyurethane copolymer can be affixed to the distal end of a catheter in a longitudinally stretched condition causing the stent to decrease in diameter.

Detailed Description Text (25):
The stent can be delivered through the body lumen on the catheter to the treatment site where the stent is released from the catheter to allow it to expand into contact with the lumen wall. A device for deploying such a stent is disclosed in U.S. Pat. No. 5,192,297 issued to Hull. Other self-expanding stent designs, including resilient metal stent designs, could also be used with fibrin either incorporated into the material forming the underlying structure of the stent or alternatively applied as a film and/or a coating onto the stent.

Detailed Description Text (48):
The stents of this invention are useful for the introduction of virus to a body lumen surface. For example, the stents of this invention can be introduced into vessels and tubular elements of the body, including, but not limited to, blood vessels of the heart, brain, limbs, gut and kidneys; lymphatic vessels; tubular elements of the male and female reproductive system, the urinary system or the gastrointestinal system, including the esophagus and the intestines. Other lumens that can receive a stent of this invention include the lung including the bronchi, trachea, bronchioles, etc., the bladder and the liver.

Detailed Description Text (49):
Methods for introducing a stent into a lumen of a body are well known and the virus-loaded stents of this invention are preferably introduced using a catheter. As will be appreciated by those of ordinary skill in the art, methods will vary slightly based on the location of stent implantation. For coronary stent implantation, the balloon catheter bearing the stent is inserted into the coronary artery and the stent is positioned at the desired site. The balloon is inflated, expanding the stent. As the stent expands, the stent contacts the lumen wall. Once the stent is positioned, the balloon is deflated and removed. The stent remains in place with the lumen-contacting surface bearing a first polymer coat with virus directly contacting the lumen wall surface. Stent implantation may be accompanied by anticoagulation therapy as needed.

Detailed Description Text (77):
About 20 juvenile pigs are divided into treatment groups (plasmid or virus). Two to 3 coronary arteries are used for stent placement in each animal. This results in about 20 to about 30 arteries for each group. Animals undergo surgery of coronary artery balloon overstretch injury and stent placement on Day 1. The animals are sacrificed 48 hours later to assess the extent of gene delivery. Following sacrifice, the injured and stented arterial sections are harvested and the sections fixed in 10% buffered formalin. Animals receive 12 mg/kg IM Ketamine and 8 mg/kg IM xylazine. Arterial access is obtained through a carotid arterial cut down following infiltration of the ventral neck region with 10 ml of 1% xylocaine. The right external carotid artery is exposed and an 8F hemostatic sheath is placed intra-

arterially for access. A bolus of heparin, 10,000 U, is given through the sheath. Under fluoroscopic guidance, using an 8F coronary guiding catheter, the coated stents are deployed in the selected coronary artery. Following deployment, the carotid artery is repaired with interrupted sutures in two layers.

Other Reference Publication (8):
G.D. Chapman, "Gene Transfer Into Cornary Arteries of Intact Animals With a Percutaneous Balloon Catheter", Circ. Research, 71, 27-33 (1992).

CLAIMS:

26. The method of claim 21, wherein the positioning step further comprises introducing the stent into a lumen of the body using a catheter.

Terms	Documents
L1 and $catheter	2

DOCUMENT-IDENTIFIER: US 6500436 B2
TITLE: Clostridial toxin derivatives and methods for treating pain

Detailed Description Text (17):
A patient, age 39, experiencing pain subsequent to spinal cord injury is treated by intrathecal administration, for example by spinal tap or by catheterization, to the spinal cord, such as to the lumbar region of the spinal cord, with between about 0.1 U/kg and 20 U/kg, (preferably between 20 U to 500 U), of an agent comprising an L-H.sub.N (derived from botulinum toxin type A)--substance P, the particular dose and site of injection, as well as the frequency of administrations depend upon a variety of factors within the skill of the treating physician, as previously set forth. Within 1-7 days after administration of the agent the patient's pain is substantially alleviated. The duration of pain reduction is from about 2 to about 6 months.

Detailed Description Text (20):
A patient, age 51, experiencing pain subsequent to injury to his hand, arm, foot or leg is treated by intrathecal administration, for example by spinal tap or by catheterization, to the spinal cord, such as to the lumbar region of the spinal cord, with between about 0.1 U/kg and 20 U/kg, (preferably from 20 U to 500 U), of an agent comprising L-H.sub.N (derived from botulinum neurotoxin type A)--substance P, the particular dose and site of injection, as well as the frequency of administrations depend upon a variety of factors within the skill of the treating physician, as previously set forth. Within 1-7 days after administration the patient's pain is substantially alleviated. The duration of pain reduction is from about 2 to about 6 months.

DOCUMENT-IDENTIFIER: US 6272370 B1
TITLE: MR-visible medical device for neurological interventions using nonlinear magnetic stereotaxis and a method imaging

Detailed Description Text (48):
The method of the invention can be used within a wide range of medical procedures as in, for example, a) providing for a temporary life-support system in stroke patients based on microcatheter retroperfusion of acutely ischemic brain tissue using nonlinear magnetic stereotaxis and MR imaging and/or X-ray guidance; b) for catheter -based administration of thrombolytic agents, MR-visible contrast media, or cerebroprotective anti-ischemia drugs, such as sodium and calcium neuronal membrane channel blockers, NMDA antagonists, glycine partial agonists, adenosine agonists and antagonists, calpain inhibitors, endothelin antagonists, antiadhesion antibodies, antiphospholipid antagonists, and nitric oxide derivatives linked to blood-brain banier transport vectors, such as liposomes, or perhaps to blood-brain banier permeabilizing agents; c) for pre- and post-surgical endovascular treatment of tumors of the brain by acute, subacute and chronic infusion of therapeutic drug agents, neurotoxins, anti-angiogenesis factors, devascularization embolotherapy agents, anti-emetics, and anti-nausea agents linked to blood-brain barrier transport vectors, such as liposomes or blood-brain barrier permeabilizers; d) the catheter device can be used as a modified stent device to preserve the patency of intracranial venous blood vessels and sinuses which are either blocked by plaques or mechanically compressed by brain tumors, trauma, infection, or edematous masses; e) the MR-visible drug delivery device can also be used to treat non-ischemic cerebral lesions, such as the plaques associated with multiple sclerosis and Alzheimer's disease, by targeted endovascular or intraparenchymal injection or infusion of neuropeptides, monoclonal antibodies and other gene-targeted therapies, growth factors, and other therapeutic agents, which may be linked to various bloodbrain transport vectors, such as liposomes or blood-brain barrier permeabilizers.

DERWENT-ACC-NO: 2004-794655
DERWENT-WEEK: 200478

TITLE: Use of botulinum toxin for the treatment of cardiovascular disease, particularly for prevention of restenosis

INVENTOR: BROOKS, G F; DONOVAN, S

PATENT-ASSIGNEE: ALLERGAN INC (ALLR)

PRIORITY-DATA: 2002US-0114740 (April 1, 2002), 1999US-0371354 (August 10, 1999), 2003US-0628905 (July 28, 2003), 2004US-0870603 (June 16, 2004)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
☐ US 20040223975 A1	November 11, 2004		012	A01N043/00

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US20040223975A1	August 10, 1999	1999US-0371354	CIP of
US20040223975A1	April 1, 2002	2002US-0114740	Cont of
US20040223975A1	July 28, 2003	2003US-0628905	Cont of
US20040223975A1	June 16, 2004	2004US-0870603	
US20040223975A1		US 6767544	Cont of

INT-CL (IPC): A01 N 43/00; A61 K 39/00; A61 K 39/38

RELATED-ACC-NO: 2001-218253;2003-899127 ;2004-552534

ABSTRACTED-PUB-NO: US20040223975A
BASIC-ABSTRACT:

NOVELTY - Treatment (M1) of a cardiovascular disease involves administering a botulinum toxin directly to a blood vessel of a mammal.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are

Intrathecal

<anatomy> Within a sheath, for example, cerebrospinal fluid that is contained within the dura mater. It also refers to drugs administered into the cerebrospinal fluid bathing the spinal cord and brain.

(30 Sep 1997)

Previous: intrastromal, intrasynovial, intratarsal, intratendinous bursa of elbow
Next: intrathecal chemotherapy, intrathecal injection, intrathoracic

intrathecal (in′trə̆-thē′kə̆l)

1. Within a sheath.
2. Within either the subarachnoid or the subdural space.

Prev

DOCUMENT-IDENTIFIER: US 20040223975 A1
TITLE: Methods for treating cardiovascular diseases with botulinum toxin

Detail Description Paragraph:
[0131] Between about 0.1 units and about 2 units of a botulinum toxin is injected into the wall of the blood vessel in the area of blockage. Following injection, the artery is allowed to dilate. A 2-millimeter compliant balloon catheter and stent, which is coated or impregnated with a botulinum toxin, are then inserted into the femoral artery of the patient. The catheter and stent are passed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent are passed along the guide wire into the target area of coronary blockage. When the catheter and stent reach the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent.

Detail Description Paragraph:
[0134] The physician begins the procedure by injecting between about 0.1 units and about 5 units of botulinum toxin type A into the wall of the left coronary artery of the patient. Following injection, the artery is allowed to dilate. A self expanding stent impregnated with the botulinum toxin is then inserted with a catheter into the common interosseous artery of the patient through the wrist area. The catheter and stent are passed through the interosseous artery to the area of blockage. A guide wire is advanced to the location of the blocked artery advancing the botulinum toxin impregnated, self expanding stent into the target area of coronary blockage. When the catheter reaches the target area, the stent is expanded bracing open the artery.

Detail Description Paragraph:
Injection of Botulinum Toxin by Use of a Catheter Injecting System

Detail Description Paragraph:
[0138] Following injection of the botulinum toxin, the artery is allowed to dilate. A 3-millimeter compliant balloon catheter and stent impregnated with botulinum toxin type A are then inserted into the femoral artery of the patient. The catheter and stent are fed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent is passed along the guide wire into the target area of coronary blockage. When the catheter reaches the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent. There is no sign of damage to the blood vessel.

CLAIMS:

24. A method as claimed in claim 23 wherein the step of providing an endovascular device comprises providing a microvascular injection device comprising a balloon catheter having an inner wall and an outer wall defining a chamber, the outer wall having micropores formed therein, the botulinum toxin carried in the chamber and expelled through the micropores in the expanded configuration.

Generate Collection Print

Search Results - Record(s) 1 through 34 of 34 returned.

1. 20050031648. 27 Aug 04. 10 Feb 05. Methods for treating diverse cancers. Brin, Mitchell F., et al. 424/239.1; A61K039/08.

2. 20040253274. 11 Jun 03. 16 Dec 04. Use of a clostridial toxin to reduce appetite. Voet, Martin A.. 424/239.1; A61K039/08.

3. 20040175399. 03 Mar 03. 09 Sep 04. Methods for treating uterine disorders. Schiffman, Rhett M.. 424/239.1; A61K039/08.

4. 20040086532. 05 Nov 02. 06 May 04. Botulinum toxin formulations for oral administration. Donovan, Stephen. 424/239.1; A61K039/08.

5. 20040086531. 05 Nov 02. 06 May 04. Methods for treating ulcers and gastroesophageal reflux disease. Barron, Richard L.. 424/239.1; A61K039/08.

6. 20040062776. 18 Sep 03. 01 Apr 04. Botulinum toxin therapy for fibromyalgia. Voet, Martin A.. 424/239.1; A61K039/08.

7. 20040060569. 15 Sep 03. 01 Apr 04. Surface topography method for determining effect of a botulinum toxin upon a muscle. Hanin, Lisa D.. 128/898; A61B019/00.

8. 20030202990. 22 Apr 03. 30 Oct 03. Intracranial botulinum toxin therapy for focal epilepsy. Donovan, Stephen, et al. 424/239.1; A61K039/08.

9. 20030178029. 14 Mar 02. 25 Sep 03. Method for determining effect of a clostridial toxin upon a muscle. Hanin, Lisa D.. 128/898; A61B019/00.

10. 20030165541. 25 Feb 02. 04 Sep 03. Methods for treating inflammation pain. Donovan, Stephen. 424/236.1; 514/2 A61K039/08 A61K038/02.

11. 20030138460. 07 Feb 03. 24 Jul 03. Methods of treating animals with botulinum toxin pharmaceutical compositions. Hunt, Terrence J.. 424/239.1; 514/54 A61K039/08 A61K031/715.

12. 20030138437. 07 Feb 03. 24 Jul 03. Reduced toxicity clostridial toxin pharmaceutical compositions. Hunt, Terrence J.. 424/184.1; A61K039/00 A61K039/38.

13. 20030118598. 05 Nov 02. 26 Jun 03. Clostridial toxin pharmaceutical compositions. Hunt, Terrence J.. 424/184.1; A61K039/00 A61K039/38.

14. 20030054975. 17 Sep 01. 20 Mar 03. Methods for treating fibromyalgia. Voet, Martin A.. 514/2; A61K038/16.

15. 20020107199. 17 Jan 02. 08 Aug 02. Methods of administering botulinum toxin. Walker, Patricia S.. 514/12; 514/44 A61K048/00 A61K038/16.

16. 20020102274. 15 Mar 02. 01 Aug 02. Clostridial toxin therapy for Hashimoto's thyroiditis.

Voet, Martin A., et al. 424/247.1; A61K039/08.

☐ 17. 20020094339. 08 Feb 02. 18 Jul 02. Methods for treating mammary gland disorders. Brin, Mitchell F., et al. 424/247.1; A61K039/08.

☐ 18. 20020081319. 30 Oct 01. 27 Jun 02. Botulinum toxin therapy for hashimoto's thyroiditis. Voet, Martin A., et al. 424/239.1; 514/2 530/350 A01N037/18 A61K038/00 A61K039/08 C07K001/00 C07K014/00 C07K017/00.

☐ 19. 20020064536. 14 Jan 02. 30 May 02. Methods of treating animals with botulinum toxin pharmaceutical compositions. Hunt, Terrence J.. 424/247.1; 514/54 A61K039/08 A61K031/715.

☐ 20. 20010053370. 11 Jul 01. 20 Dec 01. Parkinson's disease treatment. Donovan, Stephen. 424/239.1; A61K039/08.

☐ 21. 20010053369. 12 Jul 01. 20 Dec 01. Epilepsy treatment. Donovan, Stephen. 424/239.1; A61K039/08.

☐ 22. 6821520. 15 Mar 02; 23 Nov 04. Clostridial toxin therapy for Hashimoto's thyroiditis. Voet; Martin A., et al. 424/239.1; 424/234.1 424/236.1 424/247.1 424/94.67 514/12 530/350. A61K039/08 A61K038/000 C07K014/00.

☐ 23. 6776991. 26 Jun 02; 17 Aug 04. Methods for treating priapism. Naumann; Markus K.. 424/239.1; 128/898 222/327 424/581 424/94.5 604/19 604/204 604/232 604/507 604/511 604/890.1. A61K039/05.

☐ 24. 6773711. 30 Oct 01; 10 Aug 04. Botulinum toxin therapy for Hashimoto's thyroiditis. Voet; Martin A., et al. 424/239.1; 424/234.1 424/236.1 424/247.1 424/94.67 514/12 530/350. A61K039/08 A61K038/00 C07K014/00.

☐ 25. 6688311. 14 Mar 02; 10 Feb 04. Method for determining effect of a clostridial toxin upon a muscle. Hanin; Lisa D.. 128/898; 600/300. A61B019/00.

☐ 26. 6649161. 01 Nov 00; 18 Nov 03. Method for treating hypocalcemia. Donovan; Stephen. 424/94.5; 424/239.1 424/94.1 514/12 514/2. A61K038/51 A61K038/44 A61K039/08.

☐ 27. 6635247. 16 Apr 01; 21 Oct 03. Hypoparathyroid therapy. Donovan; Stephen. 424/94.5; 424/234.1 424/239.1 424/247.1 424/94.1 514/12 514/2. A61K038/51 A61K038/44 A61K039/08.

☐ 28. 6623742. 17 Sep 01; 23 Sep 03. Methods for treating fibromyalgia. Voet; Martin A.. 424/236.1; 424/247.1 435/71.3 514/12 514/2 530/344 530/350. A61K039/08 C07K014/33.

☐ 29. 6620415. 11 Jul 01; 16 Sep 03. Parkinson's disease treatment. Donovan; Stephen. 424/239.1; 424/197.11 424/234.1 424/236.1 424/408 514/2 514/937 514/963. A61K039/08 A61K039/385 A01N037/18.

☐ 30. 6565870. 28 Apr 00; 20 May 03. Methods for treating bone tumors. Donovan; Stephen. 424/423;. A61K009/00.

☐ 31. 6358513. 24 Feb 00; 19 Mar 02. Method for treating Hashimoto's thyroiditis. Voet; Martin A.,

et al. 424/239.1; 424/236.1 424/247.1 514/12 514/2 530/350. A61K039/08 A61K038/00 C07K014/00 C07K017/00.

☐ 32. 6328977. 01 Nov 00; 11 Dec 01. Method for treating hyperparathyroidism. Donovan; Stephen. 424/239.1;. A61K039/08.

☐ 33. 6319506. 01 Nov 00; 20 Nov 01. Method for treating hypercalcemia. Donovan; Stephen. 424/239.1;. A61K039/08.

☐ 34. 6306403. 14 Jun 00; 23 Oct 01. Method for treating parkinson's disease with a botulinum toxin. Donovan; Stephen. 424/239.1; 424/197.11 424/408 514/2 514/963. A61K039/08 A61K039/385 A01N037/18.

Generate Collection Print

Terms	Documents
L3 and (implant or intravesically or intra-vesical or intra-vesically or im-plant or patch or intradermal or intraepithelial)	34

Prev Page Next Page Go to Doc#

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Thursday, March 10, 2005

Hide?	Set Name	Query	Hit Count
		DB=USPT; PLUR=YES; OP=AND	
☐	L1	bladder near5 suppositor$	19

END OF SEARCH HISTORY

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Thursday, March 10, 2005

Hide?	Set Name	Query	Hit Count
		DB=USPT; PLUR=YES; OP=AND	
☐	L1	bladder near5 suppositor$	19

END OF SEARCH HISTORY

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 19 of 19 returned.

☐ 1. Document ID: US 6642274 B1

L1: Entry 1 of 19 File: USPT Nov 4, 2003

DOCUMENT-IDENTIFIER: US 6642274 B1
TITLE: Methods and compositions for preventing and treating prostate disorders

Detailed Description Text (36):
Szarka reviews the strategy of chemoprevention as a possible method of blocking the development of cancers in humans (C F Szarka et al "Chemoprevention of cancer" Curr Probl Cancer 1994 January-February; 18(1):6-79). These strategies center around the systemic administration of agents that have been shown to inhibit the growth of cancer cells in culture. The present invention makes it possible to deliver to the urinary tract sufficient amounts of tocopherols and vitamin C analogs to reach the necessary concentrations demonstrated by the in vitro studies. Systemic administration of these agents does not allow for the delivery of sufficient tissue concentrations to be effective. Concentrations of 1-2 millimolar for ascorbic acid (vitamin C), 0.5 millimolar for alpha-tocopherol and 10 micromolar for alpha-tocopherol succinate are necessary to demonstrate cytostatic or cytotoxic effects on cancer cell cultures. These tantalizing reports must be balanced by the observation that the minimal target tissue concentrations necessary to suppress the development of cancer cells or to kill cancer cells already present in a mammal exceed the maximum levels possible in oral administration by a factor of 10-20 fold for ascorbic acid and by around 7-10 fold for tocopherol. The most potent of these agents is alpha-tocopherol succinate, a succinic acid ester of tocopherol commonly used as a "dry" or solid form of vitamin E in supplements. Oral administration of this most potent antineoplastic agent results in undetectable levels of alpha-tocopherol succinate available systemically due to the rapid hydrolysis of this compound by ubiquitous serum and tissue esterases into alpha-tocopherol and the resultant 50 fold reduction in potency. Suppositories made in Example 10 are 45 mM in alpha-tocopherol succinate or 640 fold greater than the minimally effective concentration. No esterases separate the suppositories from cancerous lesions in the bladder. The present method may be used with any agent that exhibits inhibitory or toxic activity towards cancer cells but is tolerated by normal mucosal cells.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

☐ 2. Document ID: US 6548545 B1

L1: Entry 2 of 19 File: USPT Apr 15, 2003

DOCUMENT-IDENTIFIER: US 6548545 B1
TITLE: Treatment of interstitial cystitis using topical application of menthol and

L-arginine

Detailed Description Text (4):
A third embodiment intends the utilization of a compound of menthol and L-argine in a strength of five percent (5%) or less menthol and five percent (5%) or less L-Arginine applied topically to the urethra/trigone/bladder neck transvaginally with a vaginal suppository (the vagina lacks sensory fibers and therefore a higher concentration of menthol is possible than in embodiments 1 and 2 described hereinabove). The application of this cream or ointment would also be topically applied to the patient continuously over an extended period of time for proper treatment of interstitial cystitis

Detailed Description Text (9):
The invention method of treating interstitial cystitis may also include the steps of preparing a vaginal suppository to include the ointment in the carrier compound; and introducing the vaginal suppository to the urethra, trigone and bladder neck of the lower urinary tract of a mammal to provide a topical application of the ointment in the carrier compound thereto for the treatment of interstitial cystitis; preparing the ointment as a solution for infusion into the bladder; and infusing the solution into the bladder of the lower urinary tract of a mammal to provide a topical application of the ointment to the urothelial cells and to diffuse directly into the detrussor for the treatment of interstitial cystitis.

CLAIMS:

1. A method of treating interstitial cystitis of the lower urinary tract in a mammal in need thereof comprising: administering a composition comprising effective amounts of L-arginine and menthol to treat interstitial cystitus, whereby the composition is a topical ointment, a suppository or a solution for infusion into the bladder.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 3. Document ID: US 6538106 B1

L1: Entry 3 of 19 File: USPT Mar 25, 2003

DOCUMENT-IDENTIFIER: US 6538106 B1
TITLE: Compositions and methods for treating infections using analogues of indolicidin

Detailed Description Text (94):
Pharmaceutical compositions of the present invention may be administered in various manners. For example, peptide analogues may be administered by intravenous injection, intraperitoneal injection or implantation, subcutaneous injection or implantation, intradermal injection, lavage, inhalation, implantation, intramuscular injection or implantation, intrathecal injection, bladder wash-out, suppositories, pessaries, topical (e.g., creams, ointments, skin patches, eye drops, ear drops, shampoos) application, enteric, oral, or nasal route. The analogue may be applied locally as an injection, drops, spray, tablets, cream, ointment, gel, and the like. Analogue may be administered as a bolus or as multiple doses over a period of time.

4. Document ID: US 6503881 B2

L1: Entry 4 of 19 File: USPT Jan 7, 2003

DOCUMENT-IDENTIFIER: US 6503881 B2
** See image for Certificate of Correction **
TITLE: Compositions and methods for treating infections using cationic peptides alone or in combination with antibiotics

Detailed Description Text (187):
Pharmaceutical compositions of the present invention may be administered in various manners. For example, cationic peptides with or without antibiotic agents may be administered by intravenous injection, intraperitoneal injection or implantation, subcutaneous injection or implantation, intradermal injection, lavage, inhalation, implantation, intramuscular injection or implantation, intrathecal injection, bladder wash-out, suppositories, pessaries, topical (e.g., creams, ointments, skin patches, eye drops, ear drops, shampoos) application, enteric, oral, or nasal route. The combination is preferably administered intravenously. Systemic routes include intravenous, intramuscular or subcutaneous injection (including a depot for long-term release), intraocular or retrobulbar, intrathecal, intraperitoneal (e.g. by intraperitoneal lavage), transpulmonary using aerosolized or nebulized drug or transdermal. Topical routes include administration in the form of salves, ophthalmic drops, ear drops, or irrigation fluids (for, e.g. irrigation of wounds). The compositions may be applied locally as an injection, drops, spray, tablets, cream, ointment, gel, and the like. They may be administered as a bolus or as multiple doses over a period of time.

CLAIMS:

57. The method of claim 36, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular injection or implantation, intrathecal injection, subcutaneous injection or implantation, intradermal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

58. The method of claim 37, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular injection or implantation, intrathecal injection, subcutaneous injection or implantation, intradermal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

59. The method of claim 38, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular injection or implantation, intrathecal injection, subcutaneous injection or implantation, intradermal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

60. The method of claim 39, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular

injection or implantation, intrathecal injection, subcutaneous injection or implantation, intradermal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

61. The method of claim 40, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular injection or implantation, intrathecal injection, subcutaneous injection or implantation, intraderrnal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

62. The method of claim 41, wherein the pharmaceutical composition is administered by intravenous injection, intraperitoneal injection or implantation, intramuscular injection or implantation, intrathecal injection, subcutaneous injection or implantation, intradermal injection, lavage, bladder wash-out, suppositories, pessaries, oral ingestion, topical application, enteric application, inhalation, aerosolization or nasal spray or drops.

☐ 5. Document ID: US 6464670 B1

L1: Entry 5 of 19 File: USPT Oct 15, 2002

DOCUMENT-IDENTIFIER: US 6464670 B1
TITLE: Method of delivering therapeutic agents to the urethra and an urethral suppository

Brief Summary Text (2):
This invention relates to a method of delivering therapeutic agents to the urethra, bladder and related structures and an urethral suppository for use in delivering therapeutic agents thereto.

Brief Summary Text (5):
Various prior art suppositories, however, have been designed in such a manner that they are difficult to retain in position within the urethra where the precise delivery of therapeutic agents is desired. Experience has shown that such suppositories tend either to advance inwardly into the bladder or to be expelled out of the urethra prior to the complete decomposition within the urethra. In either case, the desired result of a precise placement of the specific dosage of the selected therapeutic agents within the urethra is not realized.

Brief Summary Text (6):
In order to address these shortcomings, it is known to configure urethral suppositories in the form disclosed in U.S. Pat. No. 5,085,650 to Giglio (the '650 patent). The '650 patent discloses an urethral suppository comprising a bulbous head and a conical tail joined by a narrow cylindrical shaft. As taught by the '650 patent, upon insertion of the suppository into the urethra of a human female patient, the bulbous head thereof is advanced through the entire length of the urethra and penetrates into the bladder to anchor the suppository at the bladder neck. The conical tail of the suppository prevents the further advance of the suppository into the bladder. More specifically, once the suppository is positioned within the urethra, the portion of the bulbous head of the suppository which curves inwardly toward the shaft is designed to prevent the suppository from expulsion by

its contact with the bladder walls at the bladder neck where the bladder narrows to the meet the proximal end of the urethra. At the same time, the flared portion of the conical tail, having an increasingly larger diameter than the shaft of the suppository as well as the urethra itself, is designed to prevent the suppository from over insertion by contact with the edges of the urethral orifice at the distal end thereof. It is through this combination of contact surfaces that the suppository disclosed in the '650 patent is intended to be held in position during the liquefaction thereof

Brief Summary Text (7):
While suppositories configured with bulbous heads, conical tails and narrow cylindrical shafts, as disclosed in the '650 patent aid in the placement and retention of suppositories within the urethra as compared with purely cylindrical suppositories that lack such features, such configurations permit, nonetheless, some slippage and, moreover. present certain other disadvantages. Because retention of the suppository is effected, in part, by the contact between the inwardly curved portion of the bulbous head with the bladder neck, it is required that the bulbous head of the suppository advance beyond the urethra and invade into the bladder itself. As a result, where therapeutic agents are infused throughout the material comprising the suppository, the portion of the dosage contained within the material comprising the bulbous head thereof is not positioned so that it is in direct physical contact with the mucosal lining of the urethra and thus is not absorbed readily therein. As a result, the precise delivery of a specific dosage through absorption by the urethra cannot be realized effectively. Further, insofar as the conical tail section of the suppository disclosed in the '650 patent has a flat base, it is difficult to manipulate after insertion as it provides no projections which can be grasped readily. Moreover, the roundness of the conical tail renders the distal end of the suppository less than fully compatible with the anatomical structure of the labia. As a result, the comfort of the patient is compromised.

Brief Summary Text (9):
The bladder neck is a highly vascularized and innervated tissue containing specialized cells that play an important role in the voiding cycle. The bladder is very sensitive to pressure. Any foreign body within the bladder neck will cause major discomfort to the patient. Various prior art suppositories have been designed which do not take into consideration the effect of contacting the bladder neck with a portion of the suppository. In addition, when portions of the suppository reside in different tissues such as the bladder neck and urethra, the dose of drug delivered by the suppository to an afflicted tissue cannot be readily determined. This is a result of different tissues causing the suppository to liquefy at different rates and having different rates of drug absorption.

Brief Summary Text (11):
Accordingly, an object of the present invention involves provision of a suppository shaped for cooperating with the action of the periurethral musculature to retain the suppository within the urethra with a minimum of pain and discomfort to the patient. Another object involves providing a suppository in which no portion of the suppository extends outside the urethra into the bladder, and does not make contact with the highly sensitive tissue of the bladder neck or urethral sphincter. A further object involves providing a one-size suppository which fits all patients regardless of their urethral length, and which remains stationary in the urethra regardless of body motion.

Detailed Description Text (5):
The forces generated within the urethral wall act perpendicular to the surface of any object in the urethral lumen. Therefore, the force profile acting on the surface of the cylindrical portion of the '650 suppository, parallel to the axis of the urethra, is essentially equivalent to the pressure profile generated by the force in the urethral wall described above. Movement of the '650 suppository in the urethra is constrained by the shape of the bulbous head and conical tail. The

larger diameter of these sections prevents the '650 suppository from lateral movement out of the urethra or into the bladder. Movement of the suppository in either direction in the urethra is undesirable, as the medication will be removed from contact with the urethral wall and not provide the desired therapeutic benefit.

Detailed Description Text (6):
However, the bulbous head of the '650 suppository resting in the bladder neck is not a desirable feature for a urethral suppository. The presence of an object lying in the bladder neck of a patient can be very irritating causing discomfort, pain, urgency and frequency as described above. In contrast, the present invention takes advantage of the naturally occurring forces within the urethral wall, particularly those exerted by the periurethral musculature, to hold the suppository in place. The suppository of the present invention is designed specifically to work in concert with the distinctive pressure profile generated within the urethral lumen of the human female by the periurethral musculature. As a result, movement of the suppository of the present invention within the urethra is minimized, irritation to the bladder neck is avoided, and a controlled and measurable delivery of the therapeutic agent thereto is achieved.

Detailed Description Text (18):
A suppository may only remain stationary in the urethra if all lateral forces acting on the suppository are balanced. In the present invention, the ellipsoidal head, 16, prevents the suppository, 10, from moving in the direction of the bladder. Lateral forces acting on the suppository, 10, in the bladder direction are balanced by forces acting against the elliptical head, 16, in the urethral orifice. In this fashion, the ellipsoidal head serves the same function as the conical tail of the '650 suppository, but in manner that is more physiologic to the structure of the surrounding tissues.

Detailed Description Text (19):
Lateral forces acting in to expel the suppository from the body must also be balanced to maintain a suppository in the urethra. Forces acting to expel the '650 suppository are balanced by forces acting in the bladder neck against the bulbous head. However, contact of the bladder neck with the bulbous head causes severe discomfort to the patient. The present invention also balances the forces acting to expel the suppository from the body. However, the present invention achieves this goal without contacting the bladder neck significantly reducing discomfort to the patient. This balance of forces is achieved by shaping the suppository so a component of the force acts in the direction of the bladder. In this fashion, the suppository is prevented from being prematurely expelled out the urethra and from the body.

Detailed Description Text (20):
In accordance with a preferred embodiment of the present invention, and with reference to FIG. 3, the suppository, 10, is shown in a female urethra, 35. The ellipsoidal head, 16, is positioned in the urethral orifice, 36. The force, 31, acting against the ellipsoidal head, 16, in the urethral orifice, 36, prevents the suppository, 10, from moving into the bladder, 37. The force, 31, represents the sum of all forces acting against the ellipsoidal head, 16, in the urethral orifice, 36. The shaft, 12, of the suppository, 10, is completely in the lumen of the urethra, 35, and does not protrude into the bladder, 37. The longitudinal axis, 14, of the shaft, 12, parallels the longitudinal axis, 50, of the urethra, 35. The shaft has a variable diameter profile along said length, the diameter being inversely proportional to the magnitude of force generated within the urethral wall by the periurethral musculature. The force, 30, generated within the urethral wall, 39, acts perpendicular to the surface of the suppository, 10. The force, 30, represents the sum of all forces generated within the urethral wall, 39, in contact with the suppository, 10. This force prevents the suppository, 10, from being expelled from the urethra, 35.

Detailed Description Text (22):
The balance of forces acting on the suppository, 10, determines the movement of the suppository, 10, in the urethra, 35. The angle, 42, determines the magnitude of the force working to oppose the distal movement of the suppository, 10, out of the urethra, 35. As the angle, 42, increases, the lateral force, 40, working in the direction of the bladder, 37, increases. The ellipsoidal head, 16, resting in the urethral orifice, 36, provides a balance to the lateral force, 40, acting to move the suppository towards the bladder. Increasing the angle, 42, increases the lateral force, 40, causing the ellipsoidal head, 16, to press harder against the urethral orifice, 36. In this manner, the suppository, 10, remains in the urethra without the need to contact the sensitive tissue of the bladder neck, 39. The urethral suppository of claim 13 wherein said profile is sufficiently shaped to render a lateral component of urethral luminal force acting at a point on a surface of said suppository in contact with said lumen at said point of luminal force sufficient to oppose forces acting to expel said suppository from said urethra.

Detailed Description Text (25):
The ellipsoidal knob 16 also contributes to the anchoring of the suppository within the urethra. Insofar as the major axis 17 of the knob 16 extends substantially perpendicularly to the longitudinal axis 14 of the shaft 12, and is sized to prevent insertion into the urethra, the knob 16 serves to prevent the advance of the suppository into the bladder. More specifically, the inwardly curved face surface 18 of the knob 16 which extends circumferentially about the second end 15 of the shaft 12, as shown in FIG. 2, prevents over insertion of the suppository by its contact with the urethral orifice (not shown). Moreover, due to its ellipsoidal shape, the knob 16 is easily palpable by the person performing the insertion. If subsequent manipulation is required, either to effect repositioning or early withdrawal, the knob 16 provides means for grasping the suppository readily. Finally, as a result of the substantially ellipsoidal shape of the knob 16, the suppository is compatible with the external anatomy of the human female. More specifically, the ellipsoidal nature of the knob 16 permits the alignment of the major axis 17 with the contours of the labia minora of the patient so as to afford greater comfort in the use of the suppository.

☐ 6. Document ID: US 6217875 B1

L1: Entry 6 of 19 File: USPT Apr 17, 2001

DOCUMENT-IDENTIFIER: US 6217875 B1
TITLE: Inhibitors of lipoxygenase

Brief Summary Text (39):
In this invention, inhibitors of the enzyme activity of lipoxygenase may be administered either orally or by other means, such as topically. In the case of oral administration, they can be given in tablet, granule, small grain, or powder form. In the case of non-oral administration, inhibitors of lipoxygenase can be given by injection, intravenous drip, as solid, in suspension, in a viscoelastic fluid i.e. as a suppository that can be absorbed through the mucous membrane, by local topical application to internal or external organic tissue, or by other external administration i.e. intradermal, hypodermic, intramascular and intravenous injection, local topical application, spray, suppository, or injection to the bladder and so forth.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 7. Document ID: US 6180604 B1

L1: Entry 7 of 19 File: USPT Jan 30, 2001

DOCUMENT-IDENTIFIER: US 6180604 B1
** See image for Certificate of Correction **
TITLE: Compositions and methods for treating infections using analogues of indolicidin

Detailed Description Text (95):
Pharmaceutical compositions of the present invention may be administered in various manners. For example, peptide analogues may be administered by intravenous injection, intraperitoneal injection or implantation, subcutaneous injection or implantation, intradermal injection, lavage, inhalation, implantation, intramuscular injection or implantation, intrathecal injection, bladder wash-out, suppositories, pessaries, topical (e.g., creams, ointments, skin patches, eye drops, ear drops, shampoos) application, enteric, oral, or nasal route. The analogue may be applied locally as an injection, drops, spray, tablets, cream, ointment, gel, and the like. Analogue may be administered as a bolus or as multiple doses over a period of time.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 8. Document ID: US 5998430 A

L1: Entry 8 of 19 File: USPT Dec 7, 1999

DOCUMENT-IDENTIFIER: US 5998430 A
TITLE: Use of trospium chloride and 2-component system for the same

Brief Summary Text (4):
Trospium chloride is an agent that has been known for several decades (cf. German patent 1 194 422) as an anticholinergic that is useful, for example, as a spasmolytic agent. This active agent has been available as an orally administrable, solid administration form (tablets and dragees), for intravenous or intramuscular injection as an injection solution and for rectal administration as suppositories and is mainly used for the treatment of bladder dysfunctions (urge incontinence, detrusorhyperreflexia). When these administration forms are used, losses of trospium chloride occur during the transport of the agent from the administration point to the action point. These losses are due to the excretion and metabolism processes occurring during systematic passage. In the case of the oral and rectal administration forms, losses are also due to poor absorption of trospium chloride, a quaternary ammonium compound, from the intestinal lumen into the system. In addition, with such active agent administration types, the typical side effects for anticholinergics, such as heart rate increases, dryness of the mouth, accommodation difficulties, etc. become disadvantageously noticeable.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 9. Document ID: US RE36359 E

L1: Entry 9 of 19 File: USPT Oct 26, 1999

DOCUMENT-IDENTIFIER: US RE36359 E
TITLE: Long chain carboxylic acid imide ester

Detailed Description Text (38):
The dosage of the protein derivative depends on the kind of disease, severity of the disease, patient's tolerance and other factors. For example, the usual daily dosage of SOD derivative for adult humans is 0.1 to 500 mg and preferably 0.5 to 100 mg. The dosage of NCS derivative varies depending on the method of administration, malignancyand type of the cancer, patient's condition of disease and general observation, severity of the cancer and the like, but is generally 0.1 to 100 mg for adult human and preferably 0.1 to 10 mg. The dosage is appropriately administered either in a single dose or in a few divided doses. Upon administration various dosage forms may be taken suitable for the respective routes of administration. The NCS derivative can be administered directly to local intra-tissue such as originally developed part of cancer or the part where an cancer has been enucleated by surgery, or administered intracutaneously, subcutaneously, intramascularly, intravenously, intraarticularly, orally or the like, or by external administration such as external application, spraying, suppository or by insertion intourinary bladder.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 10. Document ID: US 5776904 A

L1: Entry 10 of 19 File: USPT Jul 7, 1998

DOCUMENT-IDENTIFIER: US 5776904 A
TITLE: Dispersion preparation

Brief Summary Text (29):
A dispersion preparation according to the present invention may be administered intravenously to humans or various animals for the treatment or prevention of fungus or virus infections. Or, a dispersion preparation according to the present invention may be administered as necessary in the form of an intraarterial, intramuscular, intraspinal or subcutaneous injection, etc. It may also be prepared and used as an eye drop, nasal drop, oral medicine, inhalant, bladder infusion, external preparation or suppository, etc. In this case as well, a pharmaceutically acceptable additive such as a base, excipient, etc. may be used as an optional ingredient.

CLAIMS:

10. A composition according to claim 4 in eyedrop form, nasal drop form, in oral administration form, in inhalant administration form, in the form of a bladder infusion, or in suppository form.

16. A method according to claim 11 wherein the administration is by eyedrops, nasal drops, orally, inhalant, by bladder infusion, or by suppository.

☐ 11. Document ID: US 5759837 A

L1: Entry 11 of 19 File: USPT Jun 2, 1998

DOCUMENT-IDENTIFIER: US 5759837 A
TITLE: Chemotherapy for cancer by inhibiting the fatty acid biosynthetic pathway

Detailed Description Text (151):
Neoplastic lesions in externally accessible surfaces are preferably treated by non-invasive administration of an inhibitor of fatty acid synthesis or by local invasive administration, such as intra-lesional injection, where the administration is substantially non-systemic. Administration of a pharmaceutical composition containing a fatty acid synthesis inhibitor is substantially non-systemic where biological effects of the inhibitor can be observed locally, but the systemic concentration of the inhibitor is below the level required for therapeutic effectiveness and also below the level at which the inhibitor would generate adverse side effects. Non-invasive administration includes (1) topical application to the skin in a formulation, such as an ointment or cream, which will retain the inhibitor in a localized area; (2) direct topical application to oropharyngeal tissues; (3) oral administration of non-absorbable agents or agents that are inactivated upon absorption; (4) nasal administration as an aerosol; (5) intravaginal application of the inhibitor formulated in a suppository, cream or foam; (6) direct application to the uterine cervix; (7) rectal administration via suppository, irrigation or other suitable means; (8) bladder irrigation; and (9) administration of aerosolized formulation of the inhibitor to the lung. Aerosolization may be accomplished by well known means, such as the means described in International Patent Publication WO 93/12756, pages 30-32, incorporated herein by reference.

☐ 12. Document ID: US 5614551 A

L1: Entry 12 of 19 File: USPT Mar 25, 1997

DOCUMENT-IDENTIFIER: US 5614551 A
** See image for Certificate of Correction **
TITLE: Inhibitors of fatty acid synthesis as antimicrobial agents

Brief Summary Text (135):

In a preferred mode, the inhibitor of fatty acid synthesis is formulated in a pharmaceutical composition and applied to an externally accessible surface of the infected animal. Diseases which cause lesions in externally accessible surfaces may be treated by non-invasive administration of an inhibitor of fatty acid synthesis. Non-invasive administration includes (1) topical application to the skin in a formulation, such as an ointment or cream, which will retain the inhibitor in a localized area; (2) oral administration; (3) nasal administration as an aerosol; (4) intravaginal application of the inhibitor formulated in a suppository, cream or foam; (5) rectal administration via suppository, irrigation or other suitable means; (6) bladder irrigation; and (7) administration of aerosolized formulation of the inhibitor to the lung. Aerosolization may be accomplished by well known means, such as the means described in International Patent Publication WO 93/12756, pages 30-32, incorporated herein by reference.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 13. Document ID: US 5539132 A

L1: Entry 13 of 19 File: USPT Jul 23, 1996

DOCUMENT-IDENTIFIER: US 5539132 A
TITLE: Cerulenin compounds for fatty acid synthesis inhibition

Detailed Description Text (66):
In an advantageous mode, the inhibitor of fatty acid synthesis is formulated in a pharmaceutical composition and applied to an externally accessible surface of the animal. Diseases which cause lesions in externally accessible surfaces may be treated by non-invasive administration of an inhibitor of fatty acid synthesis. Non-invasive administration includes (1) topical application to the skin in a formulation, such as an ointment or cream, which will retain the inhibitor in a localized area; (2) oral administration; (3) nasal administration as an aerosol; (4) intravaginal application of the inhibitor formulated in a suppository, cream or foam; (5) rectal administration via suppository, irrigation or other suitable means; (6) bladder irrigation; and (7) administration of aerosolized formulation of the inhibitor to the lung. Aerosolization may be accomplished by well known means, such as the means described in International Patent Publication WO 93/12756, pages 30-32, incorporated herein by reference.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D

☐ 14. Document ID: US 5534502 A

L1: Entry 14 of 19 File: USPT Jul 9, 1996

DOCUMENT-IDENTIFIER: US 5534502 A
TITLE: Process for producing fat emulsion

Brief Summary Text (76):
A fatty emulsion according to the present invention may be administered as

necessary in the form of an intraarterial, intramuscular, intraspinal or subcutaneous injection, etc., in the same manner as for conventional drugs. Also it may be prepared and used as an eye drop, nose drop, oral medicine, inhalant, bladder infusion, external preparation or suppository, etc. In this case as well, a pharmaceutically acceptable additive such as a base, diluting agent, etc. may be used as an optional ingredient.

☐ 15. Document ID: US 5414089 A

L1: Entry 15 of 19 File: USPT May 9, 1995

DOCUMENT-IDENTIFIER: US 5414089 A
TITLE: Long chain carboxylic acid imide ester

Detailed Description Text (38):
The dosage of the protein derivative depends on the kind of disease, severity of the disease, patient's tolerance and other factors. For example, the usual daily dosage of SOD derivative for adult humans is 0.1 to 500 mg and preferably 0.5 to 100 mg. The dosage of NCS derivative varies depending of the method of administration, malignancy and type of the cancer, patient's condition of disease and general observation, severity of the cancer and the like, but is generally 0.1 to 100 mg for adult human and preferably 0.1 to 10 mg. The dosage is appropriately administered either in a single dose or in a few divided doses. Upon administration various dosage forms may be taken suitable for the respective routes of administration. The NCS derivative can be administered directly to local intra-tissue such as originally developed part of cancer or the part where an cancer has been enucleated by surgery, or administered intracutaneously, subcutaneously, intramascularly, intravenously, intraarticularly, orally or the like, or by external administration such as external application, spraying, suppository or by insertion intourinary bladder.

☐ 16. Document ID: US 5336782 A

L1: Entry 16 of 19 File: USPT Aug 9, 1994

DOCUMENT-IDENTIFIER: US 5336782 A
TITLE: Long chain carboxylic acid imide ester

Detailed Description Text (218):
The dosage of the protein derivative depends on the kind of disease, severity of the disease, patient's tolerance and other factors. For example, the usual daily dosage of SOD derivative for adult humans is 0.1 to 500 mg and preferably 0.5 to 100 mg. The dosage of NCS derivative varies depending of the method of administration, malignancy and type of the cancer, patient's condition of disease and general observation, severity of the cancer and the like, but is generally 0.1

to 100 mg for adult human and preferably 0.1 to 10 mg. The dosage is appropriately administered either in a single dose or in a few divided doses. Upon administration various dosage forms may be taken suitable for the respective routes of administration. The NCS derivative can be administered directly to local intra-tissue such as originally developed part of cancer or the part where an cancer has been enucleated by surgery, or administered intracutaneously, subcutaneously, intramascularly, intravenously, intraarticularly, orally or the like, or by external administration such as external application, spraying, suppository or by insertion intourinary bladder.

☐ 17. Document ID: US 5085650 A

L1: Entry 17 of 19 File: USPT Feb 4, 1992

DOCUMENT-IDENTIFIER: US 5085650 A
TITLE: Gynecological urethral suppository

Brief Summary Text (4):
In the treatment of urethral syndrome, trigonitis and posterior urethritis, topical application of medicament is the preferred means of treatment. Due to the remote location of the tissues affected by these ailments, however, topical application has heretofore been impossible or ineffective. For example, urethral suppositories used in the past for treatment of these ailments have slipped into the bladder or have been expelled due to internal pressure. The present invention presents a unique design for the gynecological urethral suppository which facilitates topical application of the desired medicament on the urethra itself, as well as on the bladder trigone, the ureters, the periurethra, the urethral meatus and the bladder, while facilitating comfortable retention of the suppository in the urethra during use.

Detailed Description Text (7):
The use of urethral suppositories employing the present invention is illustrated in FIGS. 1 and 2. A urethral suppository is positioned in the urethra U of a patient P by pushing on the base of the urethral suppository. Insertion of the suppository is greatly facilitated by the shape of the insertion surface of the bulbous head, which renders the insertion of the suppository relatively easy and painless. When in place, the suppository is retained relatively painlessly in the urethra due to the unique shape of the urethral suppository employing the bulbous head in concert with the conical tail. The conical tail prevents the passage of the urethral suppository into the bladder B, while facilitating application of the medicament to the urethral meatus UM. The bulbous head anchors the suppository at the bladder trigone both to facilitate application of the medicament thereto and to prevent its expulsion.

☐ 18. Document ID: US 4460360 A

L1: Entry 18 of 19 File: USPT Jul 17, 1984

DOCUMENT-IDENTIFIER: US 4460360 A
TITLE: Urethral anesthetic devices

Detailed Description Text (12):
The use of anesthetic instrument 60 in anesthetizing a female urethra is shown in FIG. 5. FIG. 5 shows the bladder 74, bladder neck 76, pubic symphysis 78 and urethra 80 of a female patient. The suppository 62 is inserted into the entire length of the urethra 80 until the obstructor 66 touches the external orifice or the meatus of the urethra. The obstructor 66 prevents the tip 65 of suppository 62 from penetrating too far into the bladder 74. The suppository 62 is now in contact with the entire inner surface of the urethra 80 and begins to melt from the patient's body heat. The suppository 62 may be held in place by hand via the handle 72 or by a cotton pledget for a period of two to five minutes while the suppository melts and anesthetizes the urethra 80. The obstructor 66 also functions to prevent the anesthetic from draining out during the melting process. Once the urethra 80 is sufficiently anesthetized, the suppository 62, if any remains, is removed and the doctor may perform the desired treatment of the urethra 80.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

☐ 19. Document ID: US 4432758 A

L1: Entry 19 of 19 File: USPT Feb 21, 1984

DOCUMENT-IDENTIFIER: US 4432758 A
TITLE: Urethral anesthetic devices

Detailed Description Text (12):
The use of anesthetic instrument 60 in anesthetizing a female urethra is shown in FIG. 5. FIG. 5 shows the bladder 74, bladder neck 76, pubic symphysis 78 and urethra 80 of a female patient. The suppository 62 is inserted into the entire length of the urethra 80 until the obstructor 66 touches the external orifice or the meatus of the urethra. The obstructor 66 prevents the tip 65 of suppository 62 from penetrating too far into the bladder 74. The suppository 62 is now in contact with the entire inner surface of the urethra 80 and begins to melt from the patient's body heat. The suppository 62 may be held in place by hand via the handle 72 or by a cotton pledget for a period of two to five minutes while the suppository melts and anesthetizes the urethra 80. The obstructor 66 also functions to prevent the anesthetic from draining out during the melting process. Once the urethra 80 is sufficiently anesthetized, the suppository 62, if any remains, is removed and the doctor may perform the desired treatment of the urethra 80.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
bladder near5 suppositor$	19

Display Format: KWIC Change Format

Previous Page Next Page Go to Doc#

US-PAT-NO: 6776991
DOCUMENT-IDENTIFIER: US 6776991 B2

TITLE: Methods for treating priapism

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Naumann; Markus K.	Kurnach			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Allergan, Inc.	Irvine	CA			02

APPL-NO: 10/ 183221 [PALM]
DATE FILED: June 26, 2002

INT-CL: [07] A61 K 39/05

US-CL-ISSUED: 424/239.1; 424/94.5, 424/581, 128/898, 222/327, 604/232, 604/204, 604/890.1, 604/19, 604/507, 604/511
US-CL-CURRENT: 424/239.1; 128/898, 222/327, 424/581, 424/94.5, 604/19, 604/204, 604/232, 604/507, 604/511, 604/890.1

FIELD-OF-SEARCH: 604/232, 604/204, 604/890.1, 604/19, 604/507, 604/511, 604/201, 604/244, 222/327, 128/898, 424/239.1, 424/581, 424/94.5, 424/423, 424/422, 424/426, 424/284.1, 424/236.1, 424/94.1, 424/94.2, 424/94.67, 424/542, 424/600, 424/682, 514/14, 514/559, 514/906, 514/962, 514/968, 435/170, 435/252.1, 435/822

PRIOR-ART-DISCLOSED:

L5: Entry 1 of 1 File: USPT Aug 17, 2004

DOCUMENT-IDENTIFIER: US 6776991 B2
TITLE: Methods for treating priapism

Brief Summary Text (29):
Treatment of certain gastrointestinal and smooth muscle disorders with a botulinum toxin are known. See e.g. U.S. Pat. Nos. 5,427,291 and 5,674,205 (Pasricha). Additionally, transurethral injection of a botulinum toxin into a bladder sphincter to treat a urination disorder is known (see e.g. Dykstra, D. D., et al, Treatment of detrusor-sphincter dyssynergia with botulinum A toxin: A double-blind study, Arch Phys Med Rehabil 1990 January;71:24-6), as is injection of a botulinum toxin into the prostate to treat prostatic hyperplasia. See e.g. U.S. Pat. No. 6,365,164 (Schmidt).

Brief Summary Text (34):
The success of botulinum toxin type A to treat a variety of clinical conditions has led to interest in other botulinum toxin serotypes. Additionally, pure botulinum toxin has been used to treat humans. see e.g. Kohl A., et al., Comparison of the effect of botulinum toxin A (Botox (R)) with the highly-purified neurotoxin (NT 201) in the extensor digitorum brevis muscle test, Mov Disord 2000;15(Suppl 3):165. Hence, a pharmaceutical composition can be prepared using a pure botulinum toxin.

Brief Summary Text (53):
Thus, local administration of a pharmaceutical excludes, for example, intravenous or oral administration, but includes, for example, intramuscular or subcutaneous injection or implant placement drug administration. Systemic administration of a botulinum toxin is contraindicated because botulism can result.

Brief Summary Text (68):
Additionally a neurotoxin, such as a botulinum toxin, according to the present invention is always locally administered in vivo directly to the patient's (a mammal) penis. Known local drug administration methods suitable for this purpose include a syringe for liquid pharmaceutical injection and insertion of a controlled release implant (See e.g. U.S. Pat. Nos. 6,383,509 and 6,312,708 (Donovan)). Systemic routes of drug administration such as oral or intravenous administration are excluded from the scope of the present invention because systemic distribution of a neurotoxin, such as a botulinum toxin, is not desirable.

Brief Summary Text (71):
In one embodiment according to this invention, the therapeutically effective doses of a neurotoxin, for example a botulinum toxin type A complex (as Botox), can be between about 1 unit and about 500 units Less than about 1 unit can result in a suboptimal detumescence effect while more than about than about 500 units of a type A preparation can result in undesired systemic effects.

10/9/12
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

14467190 PMID: 12409875
*** Conservative-management in neurogenic *** bladder *** dysfunction.***
Aslan Ahmet R; Kogan Barry A
*** Division of Urology, Albany Medical College, New York 12208, USA.***
Current opinion in urology (United States) Nov 2002, 12 (6) p473-7,
ISSN 0963-0643 Journal Code: 9200621
Publishing Model Print
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS
PURPOSE OF REVIEW: A few decades ago, urinary diversion, usually with an ileal conduit, was the ultimate outcome for most children with spina
bifida. The revolutionary institution of clean intermittent

****** catheterization *** has changed the algorithm totally. Furthermore many***
new drugs have been developed during the past decade and have decreased the
need for surgery dramatically. In this article, we will focus on the most

recent data on new modalities of therapy to help avoid urinary diversion or
****** bladder *** augmentation. RECENT FINDINGS: In addition to clean***
intermittent catheterization and oxybutynin treatment, a new generation of anticholinergic medications, such as tolterodine, has been
developed. For patients who drop out because of the side-effects of oral

administration, new methods of administration are now available, including
extended release and intravesical instillation. For those unresponsive,

botulinum-A toxin and resiniferatoxin are two relatively new drugs in the field, administered as intravesical injection and instillation,
respectively. Intravesical or transdermal electrical stimulation, sacral

nerve stimulation and biofeedback therapy are under development, but as
currently administered, are not yet completely successful. SUMMARY:

Although life-saving in many respects, bladder augmentation
introduces life-long risks of its own. Our goal in describing

'conservative' management is to prevent this step. Many alternatives to

surgery are available now and more effective strategies are under
development. (36 Refs.)
Descriptors: *Bladder, Neurogenic--therapy--TH; Anti-Dyskinesia Agents--therapeutic use--TU; Benzhydryl Compounds--therapeutic use--TU; Biofeedback (Psychology); Bladder, Neurogenic--drug therapy--DT; Bladder, Neurogenic--etiology--ET; Botulinum Toxins --therapeutic use--TU; Child; Child, Preschool; Cholinergic Antagonists --therapeutic use--TU; Cresols--therapeutic use--TU; Diterpenes --therapeutic use--TU; Electric Stimulation Therapy; Humans; Infant; Infant, Newborn; Mandelic Acids--therapeutic use--TU; Meningomyelocele --complications--CO; Muscarinic Antagonists--therapeutic use--TU; Urinary Catheterization--methods--MT
*** CAS Registry No.: 0 (Anti-Dyskinesia Agents); 0 (Benzhydryl Compounds)***

; 0 (Botulinum Toxins); 0 (Cholinergic Antagonists); 0 (Cresols); 0

(Diterpenes); 0 (Mandelic Acids); 0 (Muscarinic Antagonists); 124937-51-5 (tolterodine); 5633-20-5 (oxybutynin); 57444-62-9 (resiniferatoxin)

Record Date Created: 20021031

Record Date Completed: 20030318

14615356 PMID: 12494314

Sphincterotomy and the treatment of detrusor-sphincter dyssynergia: current status, future prospects.

Reynard J M; Vass J; Sullivan M E; Mamas M

The National Spinal Injuries Centre, Stoke Mandeville Hospital, UK.

Spinal cord - the official journal of the International Medical Society of Paraplegia (England) Jan 2003, 41 (1) p1-11, ISSN 1362-4393 Journal Code: 9609749

Publishing Model Print

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

STUDY DESIGN: Literature review of current treatment options for detrusor-sphincter dyssynergia (DSD) in spinal cord injury. OBJECTIVES: To review the outcomes and complications associated with external sphincterotomy and to summarise the results and complications of alternative treatment options for detrusor-sphincter dyssynergia in spinal cord injury. In addition, we propose a potential alternative future drug treatment for external sphincter dyssynergia based upon recent research on the neuropharmacology of the external urethral sphincter. SETTING: The National Spinal Injuries Centre, Stoke Mandeville Hospital, Aylesbury, UK. METHODS: Medline search from 1966 to 2002 using the words 'external sphincterotomy', 'detrusor-sphincter dyssynergia' and 'neurogenic ***bladder*** combined with surgery'. RESULTS: While external sphincterotomy is an effective treatment for DSD, a significant number of men following this procedure continue to have high intrarenal pressures, recurrent urinary infection or troublesome autonomic dysreflexia and a worryingly high proportion demonstrate persistently raised leak point pressures, putting them at subsequent risk of renal damage. Alternative treatments for external sphincter dyssynergia include urethral stents and balloon dilatation, both of which are effective. However, over the long term stents can undergo encrustation and there remains a definite risk of stent migration necessitating stent removal or replacement. Balloon dilatation of the external sphincter is associated with a risk of subsequent stricture formation. Intraurethral ***Botulinum*** A toxin seems to be effective though there have been no large randomised studies comparing it against placebo. However, it is not a durable treatment option and it has not found a common place in the treatment of DSD.There is now a considerable amount of experimental data from both animal and human studies to suggest that nitric oxide (NO) is an important physiological inhibitory neurotransmitter in the urethral sphincter, mediating relaxation of the external urethral sphincter. The potential role of sphincter NO augmentation for treatment of DSD is discussed. CONCLUSION: External sphincterotomy remains the mainstay of treatment for urodynamically significant detrusor-sphincter dyssynergia, but in recent years a number of effective, alternative treatment options have become available. While at present there is no effective systemic drug treatment, recent research into external sphincter neuropharmacology suggests that systemic or **topical** augmentation of external sphincter NO may provide an effective method for lowering sphincter pressure. (69 Refs.)

Descriptors: ***Bladder**, Neurogenic--surgery--SU; *Spinal Cord Injuries--complications--CO; *Urination Disorders--surgery--SU; **Bladder%%%, Neurogenic--etiology--ET;** Bladder, **Neurogenic--physiopathology--PP; Humans; Nitric Oxide Donors--therapeutic use--TU; Postoperative Complications; Spinal Cord Injuries--physiopathology--PP; Urination Disorders--etiology--ET; Urination Disorders--physiopathology--PP; Urodynamics**

*** CAS Registry No.: 0 (Nitric Oxide Donors)***

Record Date Created: 20021220

Record Date Completed: 20030403

First Hit

L3: Entry 40 of 118 File: PGPB Oct 2, 2003

DOCUMENT-IDENTIFIER: US 20030185860 A1
TITLE: Methods for treating cardiovasular diseases with botulinum toxin

Detail Description Paragraph:
[0134] Between about 0.1 units and about 2 units of a botulinum toxin is injected into the wall of the blood vessel in the area of blockage. Following injection, the artery is allowed to dilate. A 2-millimeter compliant balloon catheter and stent, which is coated or impregnated with a botulinum toxin, are then inserted into the femoral artery of the patient. The catheter and stent are passed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent are passed along the guide wire into the target area of coronary blockage. When the catheter and stent reach the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent.

Detail Description Paragraph:
[0138] The physician begins the procedure by injecting between about 0.1 units and about 5 units of botulinum toxin type A into the wall of the left coronary artery of the patient. Following injection, the artery is allowed to dilate. A self expanding stent impregnated with the botulinum toxin is then inserted with a catheter into the common interosseous artery of the patient through the wrist area. The catheter and stent are passed through the interosseous artery to the area of blockage. A guide wire is advanced to the location of the blocked artery advancing the botulinum toxin impregnated, self expanding stent into the target area of coronary blockage. When the catheter reaches the target area, the stent is expanded bracing open the artery.

Detail Description Paragraph:
[0140] Injection of Botulinum Toxin by Use of a Catheter Injecting System

Detail Description Paragraph:
[0143] Following injection of the botulinum toxin, the artery is allowed to dilate. A 3-millimeter compliant balloon catheter and stent impregnated with botulinum toxin type A are then inserted into the femoral artery of the patient. The catheter and stent are fed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent is passed along the guide wire into the target area of coronary blockage. When the catheter reaches the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent. There is no sign of damage to the blood vessel.

First Hit Fwd Refs Previous Doc Next Doc Go to Doc#

Generate Collection Print

L1: Entry 17 of 19 File: USPT Feb 4, 1992

DOCUMENT-IDENTIFIER: US 5085650 A
TITLE: Gynecological urethral suppository

Brief Summary Text (4):
In the treatment of urethral syndrome, trigonitis and posterior urethritis, topical application of medicament is the preferred means of treatment. Due to the remote location of the tissues affected by these ailments, however, topical application has heretofore been impossible or ineffective. For example, urethral suppositories used in the past for treatment of these ailments have slipped into the bladder or have been expelled due to internal pressure. The present invention presents a unique design for the gynecological urethral suppository which facilitates topical application of the desired medicament on the urethra itself, as well as on the bladder trigone, the ureters, the periurethra, the urethral meatus and the bladder, while facilitating comfortable retention of the suppository in the urethra during use.

Detailed Description Text (7):
The use of urethral suppositories employing the present invention is illustrated in FIGS. 1 and 2. A urethral suppository is positioned in the urethra U of a patient P by pushing on the base of the urethral suppository. Insertion of the suppository is greatly facilitated by the shape of the insertion surface of the bulbous head, which renders the insertion of the suppository relatively easy and painless. When in place, the suppository is retained relatively painlessly in the urethra due to the unique shape of the urethral suppository employing the bulbous head in concert with the conical tail. The conical tail prevents the passage of the urethral suppository into the bladder B, while facilitating application of the medicament to the urethral meatus UM. The bulbous head anchors the suppository at the bladder trigone both to facilitate application of the medicament thereto and to prevent its expulsion.

Previous Doc Next Doc Go to Doc#

Conotoxin: A toxin made by cone snails (Conidae), also called cone shells, which are fish-eating snails that inhabit tropical coral reefs, mangroves and associated habitats. Each of the 500 species of cone snail produces roughly 50 to 100 distinct conotoxins which they use to immobilize prey. These toxins are selective in their receptor binding sites. Conotoxins have been used to characterize receptors in heart muscle, skeletal muscle and brain. Calcium, potassium, and sodium ion channels have also been characterized using conotoxins.

Previous Doc Next Doc Go to Doc#
First Hit Fwd Refs

Generate Collection

L5: Entry 26 of 27 File: USPT Aug 7, 2001

DOCUMENT-IDENTIFIER: US 6272370 B1
TITLE: MR-visible medical device for neurological interventions using nonlinear magnetic stereotaxis and a method imaging

Brief Summary Text (5):
The concept of admninistering minimally invasive therapy and especially minimally invasive drug delivered therapy follows recent trends in medical and surgical practice towards increasing simplicity, safety, and therapeutic effectiveness. Image-guided, minimally invasive therapies have already superseded conventional surgical methods in several procedures. For example, transvascular coronary angioplasty is often now an alternative to open-heart surgery for coronary artery bypass, and laparascopic cholecystectomy is often an alternative to major abdominal surgery for gall bladder removal. The use of the less invasive techniques has typically reduced hospital stays by 1-2 weeks and the convalescence periods from 1-2 months to 1-2 weeks.

Brief Summary Text (9):
Nonlinear magnetic stereotaxis is the image-based magnetically guided movement of a small object directly through the bulk brain tissues or along tracts within the neurovasculature or elsewhere within the body. Electromagnets are used to magnetically steer the implant, giving (for example) the neurosurgeon or interventional neuroradiologist the ability to guide the object along a particular path of interest. (The implant might be either magnetically and/or mechanically advanced towards its target, but is magnetically steered, in either case. That is, magnetic fields and gradients are used to provide torques and linear forces to orient or shift the position of the implant or device, with a mechanical pushing force subsequently providing none, some, or all of the force that actually propels the implant or device. Additional force may be provided magnetically.) The implant's position is monitored by bi-planar fluoroscopy, and its location is indicated on a computerized atlas of brain images derived from a preoperative MR scan. Among other applications, the implant might be used to tow a pliable catheter or other drug delivery device to a selected intracranial location through the brain parenchyma or via the neurovasculature. Magnetic manipulation of catheters and other probes is well documented in research literature. For example, Cares et al. (J. Neurosurg, 38:145, 1973) have described a magnetically guided microballoon released by RF induction heating, which was used to occlude experimental intracranial aneurysms. More recently, Kusunoki et al. (Neuroradiol 24: 127, 1982) described a magnetically controlled catheter with cranial balloon useful in treating experimental canine aneurysms. Ram and Meyer (Cathet. Cardiovas. Diag.22:317, 1991) have described a permanent magnet-tipped polyurethane angiography catheter useful in cardiac interventions, in particular intraventricular catheterization in neonates.

Detailed Description Text (38):
Thus, MR-visible molecules may exist in a variety of environments in brain tissue, which modify the way in which the molecules can move. First, the space in which the molecules can move may be small (e.g., intracellular) or large (e.g., an enlarged extracellular space). Second, the amount of dissolved compounds and proteins may alter the viscosity of the substance injected into the tissue. The random movement

of the molecules is characterized by its diffusion coefficient ADC as the mean square distance moved for unrestricted isotropic (i.e. same in all directions) diffusion (for example a large sample of pure water). ADC is high in pure water, and lower by about a factor of 10 in tissue. As tissue becomes destroyed by disease processes, ADC is expected to rise toward its free water value. A prerequisite for MRI-guided drug delivery into the brain parenchyma or cerebral vasculature is the availability of suitable access devices. Representative of dilatation catheters having a coating which releases a therapeutic agent is U.S. Pat. No. 5,102,402 to Dror, in which a microencapsulated compound is released upon expansion of the dilatation balloon into contact with the surrounding tissue. U.S. Pat. No. 5,171,217 to March describes the delivery of several specific compounds through direct injection of microcapsules or microparticles using multiple-lumen catheters, such as disclosed by Wolinsky in U.S. Pat. No. 4,824,436. U.S. Pat. No. 5,120,322 to Davis et al. describes the process of coating the surface layer of a stent or shunt with lathyrogenic agent to inhibit scar formation during reparative tissue formation, thereby extending exposure to the drug agent. U.S. Pat. No. 5,057,106 to Kasevich discloses the use of microwave energy for heating atherosclerotic plaque in the arterial wall in combination with dilatation angioplasty. U.S. Pat. No. 4,807,620 to Strul and 5,087,256 to Taylor are examples of catheter-based devices which convert electromagnetic radiofrequency (RF) energy to thermal energy. U.S. Pat. No. 5,628,730 to Shapland et al discloses a phoretic balloon catheter with hydrogel coating which can be used to deliver drugs locally to internal body tissues under x-ray visualization. U.S. Pat. No. 5,720,720 to Laske et al. Describes a catheter-based high-flow microinfusion method which has been used to infuse substances up to 1 cm from the delivery source.

Detailed Description Text (48):
The method of the invention can be used within a wide range of medical procedures as in, for example, a) providing for a temporary life-support system in stroke patients based on microcatheter retroperfusion of acutely ischemic brain tissue using nonlinear magnetic stereotaxis and MR imaging and/or X-ray guidance; b) for catheter -based administration of thrombolytic agents, MR-visible contrast media, or cerebroprotective anti-ischemia drugs, such as sodium and calcium neuronal membrane channel blockers, NMDA antagonists, glycine partial agonists, adenosine agonists and antagonists, calpain inhibitors, endothelin antagonists, antiadhesion antibodies, antiphospholipid antagonists, and nitric oxide derivatives linked to blood-brain banier transport vectors, such as liposomes, or perhaps to blood-brain banier permeabilizing agents; c) for pre- and post-surgical endovascular treatment of tumors of the brain by acute, subacute and chronic infusion of therapeutic drug agents, neurotoxins, anti-angiogenesis factors, devascularization embolotherapy agents, anti-emetics, and anti-nausea agents linked to blood-brain barrier transport vectors, such as liposomes or blood-brain barrier permeabilizers; d) the catheter device can be used as a modified stent device to preserve the patency of intracranial venous blood vessels and sinuses which are either blocked by plaques or mechanically compressed by brain tumors, trauma, infection, or edematous masses; e) the MR-visible drug delivery device can also be used to treat non-ischemic cerebral lesions, such as the plaques associated with multiple sclerosis and Alzheimer's disease, by targeted endovascular or intraparenchymal injection or infusion of neuropeptides, monoclonal antibodies and other gene-targeted therapies, growth factors, and other therapeutic agents, which may be linked to various bloodbrain transport vectors, such as liposomes or blood-brain barrier permeabilizers.

Detailed Description Text (50):
In the general practice of the method of the invention, the MR-visible device, for example, a retroperfusion microcatheter, can be positioned in the venous intracranial circulation or dural sinuses under nonlinear magnetic stereotaxis and/or MR-imaging guidance. Cerebral delivery of drug agents or other biological materials is then monitored using contrast-enhanced magnetic susceptibility MR imaging or by active visualization via RF-Microcoils placed near the distal tip of

the catheter. In cases of microcatheter migration, misplacement, disengagement, or compliance mismatch, the microcatheter can be retrieved and then subsequently repositioned by magnetic manipulation with minimal tissue damages. The MRvisible drug solutions may contain sterically stabilized liposomes, with lipophilic or hydrophilic chelators, such as DTPA on phosphatidyl ethanolamine or steric acid embedded within the external bilayer, or double-label liposomes that chelate a T2-sensitive metal ion within the internal aqueous space and another T1-sensitive metal ion on the outside surface, or liposomes which contain 100-1000 nm diameter bubbles of, for instance, argon, carbon dioxide, or air, as a contrast agent. Real-time contrast-enhanced magnetic-susceptibility-based MR imaging may be used to visually monitor the progress of neurovascular therapy. Changes in cerebral tissue perfusion are evaluated by bolus intravenous and intra-arterial injections of magnetic susceptibility contrast media, such as DyDTPA-BMA and GdDTPA-BMA, in combination with dynamic echo-planar MR imaging methods. Changes in cerebral perfusion are also evaluated by timed infusion of MR-visible sterically stabilized liposomes, with lipophilic or hydrophilic chelators, including the conjugation of DTPA on phosphatidyl ethanolamine or steric acid, embedded within the external bilayer. Cerebral perfusion is also evaluated with MR imaging following intravascular infusion of double-label liposomes that chelate a T2-sensitive metal ion within the internal aqueous space, and a T1-sensitive metal ion on the outside membrane surface. In another general embodiment the neurovascular device provides a temporary life support system in acute stroke patients by providing a device for retroperfusion of acutely ischeniic brain under MR Wnaging guidance, which can also monitor venous pressures and provide for pulsed-air inflation of an MR-visible angioplasty balloon at the distal end of the catheter.

Detailed Description Text (68):
As previously noted, it may be desirable to remove the magnetic tip used in the nonlinear magnetic stereotaxis positioning and guidance of the delivery device during the MR imaging and visualization step. It may also be desirable to be able to move that magnetic tip back into a movement effective position after the MR imaging to assist in further guidance or movement of the delivery device. This can be effected by any form of attachment or engagement of the tip to the catheter wherein the tip can be released or repositioned and then returned to an attached arrangement to the tip which attachment is of sufficient security as to enable movement, torque and application of directing or motivating forces to the catheter or delivery device. For example, in the simplest mode, the tip may be secured to the distal end of the device by tension on an elongated element holding the tip against an opening with a smaller diameter of the opening to the cross-section of the tip. The tip may be moved from the distal end by pulling on the elongated element, and then returned to the distal end after MR visualization by applying pushing tension on the elongated element again. Microminiature circuitry may also be used with the distal end to move the tip in a similar manner. A balloon system may be used whereby inflation of a balloon (with the tip on a surface of the balloon) will cause the expansion of the balloon to move the tip the expanded diameter of the balloon. A threaded engagement of the tip on the distal end of the delivery device (or at another guidance effective position) may be used, with unthreading, by the application of torque to the tip that may be used to temporarily free the tip, and reverse torque used to rethread the tip. This may be particularly effective where the tip lies completely within a threaded lumen, and rotation of the tip causes the tip to move in the desired direction within the lumen, first out of the image zone and then back into a desired position relative to effective guidance of the delivery device. This is most effective where movement out of the image zone would be in a direction away from the distal end of the tip. The tip may be slidably positioned on an outside surface or inside surface of the delivery device, and moved by appropriately applied forces back and forth over the surface of the delivery device. Where there is a porous or open area in the drug delivery device for allowing perfusion of drug along the sides of the device, the slidable tip may have a combined effect of non-linear magnetic stereotaxis guidance tip and protective cover/timed drug release activator for the delivery device.

CLAIMS:

19. A method of delivering a drug selected by selective infusion or retroperfusion comprising the steps of:

a) positioning a delivery device by a process selected from the group consisting of nonlinear magnetic stereotaxis and intra-operative magnetic resonance imaging-based guidance;

b) verifying the location of said device via magnetic resonance (MR) imaging, and

c) delivering said drug by infusion or retroperfusion through said delivery device; in which method an MR-visible drug delivery device is used to treat tumors of a brain by acute, subacute or chronic infusion, said drug being selected from the group consisting of therapeutic drug agents, neurotoxins, anti-angiogenesis factors, embolotherapy agents, anti-emetics, anti-nausea agents, genetic therapies, anti-tunoral agents and antineoplastic agents, said verifying and delivering being performed under real time MR-visualization;

wherein said verifying is done after positioning of said delivery device, and delivering said material is performed after verifying the location of said delivery device, wherein after said delivery of said material, magnetic resonance imaging visualizes the movement of said material through tissue, and wherein after visualizing the movement of said material through tissue, magnetic resonance imaging is temporarily halted, said delivery device is repositioned, and magnetic resonance imaging is restarted.

Previous Doc Next Doc Go to Doc#

US006272370B1

(12) **United States Patent**
Gillies et al.

(10) **Patent No.: US 6,272,370 B1**
(45) **Date of Patent: Aug. 7, 2001**

(54) **MR-VISIBLE MEDICAL DEVICE FOR NEUROLOGICAL INTERVENTIONS USING NONLINEAR MAGNETIC STEREOTAXIS AND A METHOD IMAGING**

(75) Inventors: **George T. Gillies**, Earlysville, VA (US); **John Kucharczyk**, Minneapolis, MN (US); **William C. Broaddus**, Midlothian, VA (US); **Richard Latchaw**, Miami, FL (US)

(73) Assignees: **The Regents of University of Minnesota**, MN; **Virginia Commonwealth University**, Virginia

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/131,031**

(22) Filed: **Aug. 7, 1998**

(51) **Int. Cl.**[7] **A61B 5/05**

(52) **U.S. Cl.** **600/411**; 600/417; 600/423; 600/424; 600/427; 600/429; 600/420; 606/130; 324/309; 324/318; 604/508; 604/510

(58) **Field of Search** 600/411, 409, 600/410, 417, 423, 424, 427, 429, 420; 324/318, 309; 604/508, 510; 606/130

(56) **References Cited**

U.S. PATENT DOCUMENTS

D. 298,190	10/1988	Komai et al.	D6/380
D. 329,335	9/1992	Komai et al.	D6/361
D. 329,338	9/1992	Komai et al.	D6/370
D. 333,042	2/1993	Komai et al.	D6/370
3,055,370	9/1962	McKinney et al.	128/303
3,554,186	1/1971	Leksell et al.	128/2
3,705,938	12/1972	Hyman et al.	424/19
3,857,934	12/1974	Bernstein et al.	424/30
3,868,956	3/1975	Alfidi et al.	128/345
3,986,703	10/1976	Brett et al.	254/173 R

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0442329	8/1991	(EP)	G01D/5/18
93/15784	8/1993	(WO)	A61M/25/00
93/15785	8/1993	(WO)	A61M/25/00

(List continued on next page.)

OTHER PUBLICATIONS

Cares, H.L., et al., "Laboratory experience with a magnetically guided intravascular catheter system", *Journal of Neurosurgery*, 38, (2), 145–154, (Feb. 1973).

Chandler, W.F., et al., "Use of Implantable Pump System for Intraarterial, Intraventricular and Intratumoral Treatment of Malignant Brain Tumors", *Annals of the New York Acadamy of Sciences*, 531, Neurological Applications of Implanted Drug Pumps, 206–212, (1988).

Driller, J., et al., "A review of medical applications of magnet attraction and detection", *Journal of Medical Engineering & Technology*, 11 (6), 271–277, (Nov./Dec. 1987).

(List continued on next page.)

Primary Examiner—Marvin M. Lateef
Assistant Examiner—Jeoyuh Lin
(74) *Attorney, Agent, or Firm*—Mark A. Litman & Assoc.

(57) **ABSTRACT**

The present invention comprises a device and method for targeted drug delivery, and especially intracranial infusion or retroperfusion drug delivery using nonlinear magnetic stereotaxis in combination with magnetic resonance (MR) imaging and/or X-ray visualization. An MR-visible and/or X-ray visible drug delivery device is positioned by non-linear magnetic stereotaxis at a site such as an intracranial target site, its location is verified via MR imaging, and it is then used to deliver a biologically active material such as a diagnostic or therapeutic drug solution into that site (such as the brain) at constant or variable rates. The spatial distribution kinetics of the injected or infused drug agent may be monitored quantitatively and non-invasively using real-time MR-imaging such as water proton directional diffusion MR imaging, to establish the efficacy of targeted drug delivery.

21 Claims, 3 Drawing Sheets

DOCUMENT-IDENTIFIER: US 6767544 B2
TITLE: Methods for treating cardiovascular diseases with botulinum toxin

Detailed Description Text (20):
Between about 0.1 units and about 2 units of a botulinum toxin is injected into the wall of the blood vessel in the area of blockage. Following injection, the artery is allowed to dilate. A 2-millimeter compliant balloon catheter and stent, which is coated or impregnated with a botulinum toxin, are then inserted into the femoral artery of the patient. The catheter and stent are passed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent are passed along the guide wire into the target area of coronary blockage. When the catheter and stent reach the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent.

Detailed Description Text (25):
The physician begins the procedure by injecting between about 0.1 units and about 5 units of botulinum toxin type A into the wall of the left coronary artery of the patient. Following injection, the artery is allowed to dilate. A self expanding stent impregnated with the botulinum toxin is then inserted with a catheter into the common interosseous artery of the patient through the wrist area. The catheter and stent are passed through the interosseous artery to the area of blockage. A guide wire is advanced to the location of the blocked artery advancing the botulinum toxin impregnated, self expanding stent into the target area of coronary blockage. When the catheter reaches the target area, the stent is expanded bracing open the artery.

Detailed Description Text (28):
Injection of Botulinum Toxin by Use of a Catheter Injecting System

Detailed Description Text (31):
Following injection of the botulinum toxin, the artery is allowed to dilate. A 3-millimeter compliant balloon catheter and stent impregnated with botulinum toxin type A are then inserted into the femoral artery of the patient. The catheter and stent are fed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent is passed along the guide wire into the target area of coronary blockage. When the catheter reaches the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent. There is no sign of damage to the blood vessel.

US006767544B2

(12) **United States Patent**
Brooks et al.

(10) **Patent No.: US 6,767,544 B2**
(45) **Date of Patent: Jul. 27, 2004**

(54) **METHODS FOR TREATING CARDIOVASCULAR DISEASES WITH BOTULINUM TOXIN**

(75) Inventors: **Gregory F. Brooks, Irvine, CA (US); Stephen Donovan, Capistrano Beach, CA (US)**

(73) Assignee: **Allergan, Inc., Irvine, CA (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2 days.

(21) Appl. No.: **10/114,740**

(22) Filed: **Apr. 1, 2002**

(65) **Prior Publication Data**

US 2003/0185860 A1 Oct. 2, 2003

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/371,352, filed on Aug. 10, 1999, now Pat. No. 6,263,040.

(51) **Int. Cl.**[7] **A61K 39/08**

(52) **U.S. Cl.** **424/247.1**; 424/450; 427/2.24; 427/2.38; 427/338; 514/2; 514/21; 514/46; 514/47; 514/814; 514/832; 604/265; 623/1; 623/11

(58) **Field of Search** 514/2, 21, 46, 514/47, 814, 832, 14, 964; 427/2.24, 2.38, 338; 623/1, 11; 604/265, 500; 424/247.1, 450, 236.1, 236.9, 239.1, 423, 422, 484, 486, 194.1; 530/350; 128/898; 435/29, 7.1

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,092,841	A		3/1992	Spears
5,385,935	A		1/1995	Tamai et al.
5,437,291	A	*	8/1995	Pasricha et al. 128/898
5,562,907	A	*	10/1996	Arnon 424/236.1
5,766,605	A		6/1998	Sanders et al.
5,851,786	A	*	12/1998	Johnson 435/29
5,939,070	A	*	8/1999	Johnson et al. 424/194.1
5,989,280	A		11/1999	Euteneuer et al.
6,057,367	A	*	5/2000	Stamler et al. 514/561
6,063,768	A	*	5/2000	First 514/14
6,102,904	A	*	8/2000	Vigil et al. 604/500
6,183,506	B1		2/2001	Penn et al.
6,190,404	B1		2/2001	Palmaz et al.
6,196,230	B1		3/2001	Hall et al.
6,217,608	B1		4/2001	Penn et al.
6,238,872	B1	*	5/2001	Mosseri 435/7.1
6,239,118	B1		5/2001	Schatz et al.
6,241,758	B1		6/2001	Cox
6,261,318	B1		7/2001	Lee et al.
6,264,671	B1		7/2001	Stack et al.
6,270,521	B1		8/2001	Fischell et al.
6,290,961	B1	*	9/2001	Aoki et al. 424/184.1
6,293,959	B1		9/2001	Miller et al.
6,299,893	B1	*	10/2001	Schwartz et al. 424/422
6,306,162	B1		10/2001	Patel
6,306,423	B1		10/2001	Donovan et al.
6,312,708	B1		11/2001	Donovan
6,319,505	B1	*	11/2001	Aoki et al. 424/236.1
6,344,055	B1		2/2002	Shukov
6,383,509	B1	*	5/2002	Donovan et al. 424/423
6,429,189	B1	*	8/2002	Borodic 514/2
6,464,986	B1		10/2002	Aoki et al.
6,579,847	B1	*	6/2003	Unger 514/2

FOREIGN PATENT DOCUMENTS

WO	01/10458	* 2/2001	..... A61K/38/16
WO	01/82947	* 11/2001	..... A61K/38/00

OTHER PUBLICATIONS

Muniyappa, R et al, Am. J. Physiol. Heart Cir. Physiol., vol. 278, (6) pp. H1762–H1768, Jun. 2000.*

DePalma, GD et al, Endoscopy, Dec. 2001, vol. 33(12), pp. 1027–1030.*

Maria, G et al, Diseases of the colon & Rectum, 2000, vol. 43(5), May, pp. 721–723.*

Tan, EK et al, Movement disorders, vol. 14(2), pp. 345–349, 1999.*

Aktories, K., et al., *Clostridium botulinum C3 ADP–Ribosyltransferase*, Current Topics in Microbiology and Immunology, vol. 175, 1992, 115–131.

Fauci, A.S., et al., *14th Edition Harrison's Principles of Internal Medicine, McGraw–Hill*, pp. 904–907, 1998.

Fiorentini, C. et al., *Bacterial toxins and the Rho GTP–binding protein: what microbes teach us about cell regulation*, Cell Death and Differentiation (1998) 5, pp. 720–728.

Nishiki, T., et al., *Morphological effects of clostridium botulinum C3 exoenzyme on cultured cells*, Jpn. J. Med. Sci. Biol. 43, 1990, 261–262.

Claus, D., et al., Botulinum Toxin: influence on respiratory heart rate variation, Mov Disord Sep. 1995; 10(5) 574–579.

Girlanda, P., et al., Botulinum toxin therapy: distant effects on neuromuscular transmission and autonomic nervous system, J. Neurol Neurosurg Psychiatry 1992;55(9):844–5.

Lamanna, C., et al., Cardiac Effects of Botulinal Toxin, Arch Int Pharmacodyn Ther 1988; 293: 69–83.

Malnick, S., et al., Fatal heart block following treatment with botulinum toxin for achalasia, Am J Gastroenterol 2000;Nov; 95(11):3333–3334.

(List continued on next page.)

Primary Examiner—Lynette R. F. Smith
Assistant Examiner—Ginny Allen Portner
(74) *Attorney, Agent, or Firm*—Stephen Donovan; Martin A. Voet; Robert J. Baran

(57) **ABSTRACT**

The present invention provides for methods of treating cardiovascular diseases in a mammal. The methods include a step of administering an effective amount of a botulinum toxin directly to a blood vessel of a mammal thereby treating a cardiovascular disease.

14 Claims, No Drawings

First Hit

L3: Entry 9 of 118 File: PGPB Jul 22, 2004

DOCUMENT-IDENTIFIER: US 20040142005 A1
TITLE: Botulinum toxin eluting stent

Detail Description Paragraph:
[0134] Between about 0.1 units and about 2 units of a botulinum toxin is injected into the wall of the blood vessel in the area of blockage. Following injection, the artery is allowed to dilate. A 2-millimeter compliant balloon catheter and stent, which is coated or impregnated with a botulinum toxin, are then inserted into the femoral artery of the patient. The catheter and stent are passed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent are passed along the guide wire into the target area of coronary blockage. When the catheter and stent reach the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent.

Detail Description Paragraph:
[0138] The physician begins the procedure by injecting between about 0.1 units and about 5 units of botulinum toxin type A into the wall of the left coronary artery of the patient. Following injection, the artery is allowed to dilate. A self expanding stent impregnated with the botulinum toxin is then inserted with a catheter into the common interosseous artery of the patient through the wrist area. The catheter and stent are passed through the interosseous artery to the area of blockage. A guide wire is advanced to the location of the blocked artery advancing the botulinum toxin impregnated, self expanding stent into the target area of coronary blockage. When the catheter reaches the target area, the stent is expanded bracing open the artery.

Detail Description Paragraph:
[0140] Injection of Botulinum Toxin by use of a Catheter Injecting System

Detail Description Paragraph:
[0143] Following injection of the botulinum toxin, the artery is allowed to dilate. A 3-millimeter compliant balloon catheter and stent impregnated with botulinum toxin type A are then inserted into the femoral artery of the patient. The catheter and stent are fed through the femoral artery to the area of blockage using a video monitor to guide the process. A guide wire is advanced to the location of the blocked artery, and the catheter and stent is passed along the guide wire into the target area of coronary blockage. When the catheter reaches the target area, the balloon is inflated and the stent is correspondingly expanded bracing open the artery. The balloon is deflated and removed leaving in place the expanded stent. There is no sign of damage to the blood vessel.

Summary of Invention Paragraph:
[0062] Besides endoscopic assisted local administration of a neurotoxin to treat an otic disorder, the present methods can be practiced by injection through the tympanic membrane using a fine (EMG recording) needle, through use of an indwelling catheter placed through a myringotomy incision, and injection or infusion through the Eustachian tube by means of a small tubal catheter. Additionally, a neurotoxin can be administered to the inner ear by placement of a gelfoam, or similar absorbent and adherent product, soaked with the neurotoxin against the round window membrane of the middle/inner ear or adjacent structure.